

# Field Borders: Giving Bobwhites the Edge

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Alabama's bobwhite quail population is now only about 20% of what it was in the mid 1960s, when sharp population declines began throughout the southeastern United States. Various factors are involved in the decline of quail, but the most important is a great deficiency of habitat where breeding bobwhites can nest and raise chicks. About 80% of the quail in a population die each year. With such high mortality, a successful breeding season is critical for bobwhites to restore their numbers from one year to the next. Successful breeding is measured by nesting success and chick survival, which depend on the availability of nesting cover and brood habitat.

In Alabama, ideal nesting sites are composed of standing broomsedge mixed with briars, legumes, and other broadleaf weeds. Adult bobwhites will construct nests at the base of broomsedge clumps, using the dead grass blades for nesting material. The mix of standing broomsedge and broadleaf plants conceals the birds and nests from predators while affording the birds open travelways to and from the nest. After the nests hatch, the broods of young chicks must have an abundance of insects for growth and survival. Flightless chicks are very vulnerable to predators and require plant covers that conceal them as they move and feed. Ideal habitat for the broods consists of annual broadleaf weeds, especially ragweed and partridge pea. Annual weeds are rich in insect life, and their foliage forms a canopy that hides quail broods.

Such natural plant covers are very deficient in current landscapes that are dominated by thick wood, intensive agriculture, mowed hayfields, and grazed pasture. Quail cannot flourish without an abundance of natural grasses and weeds that provide nesting cover and brood habitat.

Agricultural field borders offer an excellent location to begin installing bobwhite reproductive habitat in today's



landscapes. Field border zones – at least 30 feet wide, that remain uncropped and are allowed to volunteer in natural weeds and grasses – provide quail with nesting cover and brood-rearing habitat in agricultural environments. In North Carolina, farms with field border habitats on less than 10% of the field areas contained four times as many quail nests as farms without field border systems. The border covers are also valuable for other wildlife, including various grassland birds that are experiencing population declines similar to the bobwhite. Naturally vegetated field borders trap sediments, pesticides, and excess nutrients generated by farming operations, helping to minimize agricultural pollution. Managed field border zones are being shown to be more worthwhile for achieving overall farm conservation than to farm them for minimal crop yields.

Field border habitats should be managed with a rotational system of late winter-early spring disking. Disk one-fourth to one-third of an established field border system each year, in convenient segments. A segment, for example, may be one side of a field. Rotate disking to an adjacent segment each following year. With this regime, most of the field border

cover remains standing each year, but is managed in weed and grass stages perpetually useful to quail for nesting and raising broods. Field borders with Bermuda grass or other exotic grass encroachment will require herbicide treatments to remove the grass so that natural plant growth is not hindered.

Field border habitats of natural grasses and weeds will increase quail populations on farm lands because they supply critical reproductive habitats that are deficient in today's landscapes. Field border systems will not cure all problems associated with the loss of quail, but in locations where they are being used they are giving bobwhites the edge they need to shift from declining to increasing populations.

For more information, please contact Stanley Stewart, Wildlife Biologist, Division of Wildlife and Freshwater Fisheries, 64 North Union Street, Suite 584, Montgomery, Alabama, 36130. ☎

## Quail Management Information for Landowners

The Alabama Wildlife Federation recently held three regional short courses entitled "Managing for Bobwhite Quail in Alabama" which was attended by professional foresters, wildlife biologists, and conservationists from across the state. This training was made possible in part through funding provided by the Forest Land Enhancement Program, administered by the USDA Forest Service and the Alabama Forestry Commission. All attendees were provided copies of the following publications to be distributed to landowners interested in providing early successional habitat for quail and other wildlife habitat management on their timber lands: *Ecology and Management of Bobwhite Quail in Alabama* by Stan Stewart; *Landowners Guide to Native Warm Season Grasses in the Midsouth* by Dr. Craig Harper, UT Extension; and *A Guide to Managing Northern Bobwhites and Other Birds Associated With Early Successional Habitats* by the Alabama Wildlife Federation. To receive assistance, contact your local Alabama Cooperative Extension System, Alabama Forestry Commission, or the Wildlife and Freshwater Fisheries.

Stan Stewart's book is also available by downloading it from Conservation's web site at [www.outdooralabama.com/hunting/game/quail.cfm](http://www.outdooralabama.com/hunting/game/quail.cfm) or by calling the Wildlife Section at (334) 242-3469.